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=> d que stat l18
L1             1 SEA FILE=REGISTRY ABB=ON  "ETHYLENE OXIDE"/CN
L2             1 SEA FILE=REGISTRY ABB=ON  "PROPYLENE OXIDE"/CN
L3             1 SEA FILE=REGISTRY ABB=ON  "BUTYLENE OXIDE"/CN
L5           110 SEA FILE=REGISTRY ABB=ON  (75-21-8 AND 75-56-9 AND 26249-20-7)/
                 CRN
L6             1 SEA FILE=REGISTRY ABB=ON  CHITIN/CN
L7             1 SEA FILE=REGISTRY ABB=ON  AGAR/CN
L8             1 SEA FILE=REGISTRY ABB=ON  CARRAGEENAN/CN
L9             1 SEA FILE=REGISTRY ABB=ON  GUAR/CN
L10            1 SEA FILE=REGISTRY ABB=ON  "GUM ARABIC"/CN
L11            1 SEA FILE=REGISTRY ABB=ON  TRAGACANTH/CN
L12            1 SEA FILE=REGISTRY ABB=ON  XANTHAN/CN
L15          680 SEA FILE=REGISTRY ABB=ON  (1398-61-4 OR 9002-18-0 OR 9000-07-1
                 OR 9000-30-0 OR 9000-01-5 OR 9000-65-1 OR 11138-66-2)/CRN
L16          498 SEA FILE=HCAPLUS ABB=ON  ?POLYSACCHARID?(3A)?ETHER? AND
                 (?PROCES? OR ?TECHNIQ? OR ?PRODUC? OR ?PREP?)
L17          112 SEA FILE=HCAPLUS ABB=ON  L16 AND (?ELECTRODIAL? OR ?SEMIPERMEAB
                 ? OR ?SEMI?(W)?PERMEAB? OR ?BIPOLAR? OR BI(W)?POLAR? OR L6 OR
                 L7 OR L8 OR L9 OR L10 OR L11 OR L12 OR L15 OR ?CHITIN OR
                 ?AGAR? OR ?CARRAGEEN? OR ?ALGINAT? OR ?GUAR? OR ?ARABIC? OR
                 ?TRAGACANTH? OR ?XANTHAN?)
L18            6 SEA FILE=HCAPLUS ABB=ON  L17 AND (L1 OR L2 OR L3 OR L5)

=> d ibib abs hitrn 1-6

L18  ANSWER 1 OF 6  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:         2003:43049  HCAPLUS
DOCUMENT NUMBER:          138:91690
TITLE:                    Recycling of salts in the manufacture of modified
                          polysaccharide ethers from sodium
                          salt stock
INVENTOR(S):              Mallon, Charles B.; Vames, John S.; Sarlis, John I.;
                          See, Benito; Trampe, David M.; Datta, Rathin
PATENT ASSIGNEE(S):       USA
SOURCE:                   U.S. Pat. Appl. Publ., 11 pp.
                          CODEN: USXXCO
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
     US 2003013871      A1   20030116      US 2001-775760   20010202
PRIORITY APPLN. INFO.:                   US 2001-775760   20010202
AB   Salts formed during the manuf. of polysaccharide ethers
     , e.g., sodium nitrate or sodium acetate, are converted to their
     corresponding acids and bases by means of an elec. current, preferably in
     combination with a bipolar membrane and suitable cation and/or
     anion membranes.  The acids and bases recovered from the processes
     can be recycled, thereby avoiding the need to provide for disposal of the
     salts.  Thus, a stream contg. .apprx.8% Na acetate, 0.5% NaOH, 4% glycols,
     and 0.5% cellulosic material recovered from a synthesis of hydroxyethyl
     cellulose was processed in a TS-2 ED stack contg. 6 cell pairs
     made up of AM-1, CM-2 and CURIUM ion-exchange membranes.  The pH of the
     feed was raised to .apprx.11.5 by addn. of 40% NaOH whenever the pH
     dropped to .apprx.11.  As a result of this pH control, .apprx.91% of the
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acetate was transferred and cell resistance was kept under control. Na acetate concn. in the conc. was .apprx.20%. The **product** from the ED step was then **processed** through a column contg. Duolite C-467 to remove multivalent cations. Ca and Mg cations were below 1 ppm in the resulting stream. This **product** stream was then subjected to water splitting **electrodialysis** using a 2-compartment TS-2 stack equipped with BP1, CM-1, and CMX ion exchange membranes. The stream **processed** with no difficulty and **produced** an acid/salt **product** contg. about 16% acetic acid and a sodium hydroxide **product** with a concn. of .apprx.10%. There was no evidence of irreversible membrane fouling and cell voltage remained low (.apprx.1.2 V/cell pair) throughout the run.

IT **1398-61-4DP, Chitin**, derivs. **9000-01-5DP**, Gum **Arabic**, derivs. **9000-07-1DP, Carrageenan**, derivs. **9000-30-0DP, Guar**, derivs. **9000-65-1DP**, **Tragacanth**, derivs. **9002-18-0DP, Agar**, derivs. **11138-66-2DP, Xanthan** gum, derivs.
RL: IMF (Industrial manufacture); PREP (Preparation)
(method for recycling of salts in manuf. of modified cellulose ether)

IT **75-21-8**, Ethylene oxide, reactions **75-56-9**, Propylene oxide, reactions **26249-20-7**, Butylene oxide
RL: RGT (Reagent); RACT (Reactant or reagent)
(method for recycling of salts in manuf. of modified cellulose ether)

L18 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:736368 HCAPLUS
DOCUMENT NUMBER: 134:163239
TITLE: Synthesis of hydroxypropyl derivatives of **chitin** and chitosan and observation of phase behavior of their aqueous solutions
AUTHOR(S): Asahina, Daisuke; Matsubara, Tomoyuki; Miyashita, Yoshiharu; Nishino, Yoshiyuki
CORPORATE SOURCE: Department of Material Systems Engineering, Tokyo University of Agriculture and Technology, Koganei, Tokyo, 184-8588, Japan
SOURCE: Sen'i Gakkaishi (2000), 56(9), 435-442
CODEN: SENGA5; ISSN: 0037-9875
PUBLISHER: Sen'i Gakkai
DOCUMENT TYPE: Journal
LANGUAGE: Japanese

AB Hydroxypropyl (HP) derivs. of **chitin** and chitosan with different degrees of substitution were synthesized via **etherification** of the **polysaccharides** with propylene oxide under various conditions. Mol. structure of the HP derivs. was characterized by 1H and 13C NMR spectroscopy. On the basis of the spectral data, we proposed the equations to det. the molar substitution (MS), degree of pendants (DPs) and degree of substitution (DS) of the HP derivs. obtained. Phase behavior and liq.-cryst. characteristics of aq. solns. of the derivs. were also examd. by light absorption and polarized optical microscopy (POM). Aq. solns. of highly substituted HP derivs. were phase-sepd. and became turbid at an elevated temp. The obsd. cloud point varied sensitively, depending on the degree of substitution and mol. wt. of HP derivs., concn. of the solns., and coexistence of inorg. salts. POM observations revealed that the formation of an optically anisotropic monophase prevailed in the concd. solns. of highly substituted HP derivs.

IT **75-56-9DP**, Propylene oxide, reaction **products** with **chitin** or chitosan **1398-61-4DP, Chitin**, hydroxypropyl derivs.
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(synthesis of hydroxypropyl derivs. of **chitin** and chitosan

and observation of phase behavior of aq. solns.)
IT **75-56-9**, Propylene oxide, reactions **1398-61-4**, **Chitin**
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis of hydroxypropyl derivs. of **chitin** and chitosan and observation of phase behavior of aq. solns.)

L18 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:708699 HCAPLUS
DOCUMENT NUMBER: 131:326313
TITLE: **Etherified polysaccharides** as concrete modifiers for improved workability
INVENTOR(S): Veen, Uko; Lamberti, Vincent Joseph Marie Alphonse; Bleeker, Ido Pieter
PATENT ASSIGNEE(S): Cooperatieve Verkoop- en Productievereniging Van Aardappelmeel en Derivaten, Neth.
SOURCE: PCT Int. Appl., 47 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9955632	A1	19991104	WO 1999-NL248	19990427
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 955277	A1	19991110	EP 1998-201379	19980428
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 9935397	A1	19991116	AU 1999-35397	19990427
EP 1080048	A1	20010307	EP 1999-917238	19990427
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: EP 1998-201379 A 19980428
WO 1999-NL248 W 19990427

AB Polysurfactant-like polysaccharide concrete modifier preferably derived from potato starch is used to improve workability of concrete mixes. The manuf. of the modifier is described in details and includes **etherification** of **polysaccharides** up to a degree of substitution allowing dissolving the modifier in a 95 wt.% ethanol soln.
IT **75-21-8**, Oxirane, **processes 75-56-9**, **processes 9000-30-0**, **Guar 26249-20-7**, Butylene oxide
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(**etherified polysaccharides** as concrete modifiers for improved workability)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L18 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:429148 HCAPLUS

DOCUMENT NUMBER: 117:29148
TITLE: Hydrophobically modified hydroxybutyl ethers of polygalactomannan
INVENTOR(S): Zody, George M.; Morgan, Michael E.
PATENT ASSIGNEE(S): Hi-Tek Polymers, Inc., USA
SOURCE: Can. Pat. Appl., 21 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2023215	AA	19911230	CA 1990-2023215	19900814
CA 2023215	C	20010327		
US '5233032	A	19930803	US 1990-546560	19900629

PRIORITY APPLN. INFO.: US 1990-546560 A 19900629

AB The title ethers, useful as thickeners and can be used alone or with other surfactants in drilling muds, are **prepd.** to contain hydrophobic groups such as C8-28 alkoxy, HOZO (Z = C8-28 alkylene bearing OH group on the C beta to ether O), and R1OCH2CH(OH)CH2O (R1 = C5-25 alkyl) wherein the mol. hydrophilic substitution degree is 0.2-1, and the mol. hydrophobic substitution degree is 0.001-0.2. Thus, a hydroxybutylated **guar** was **prepd.** in a customary way using butylene oxide, combined (90 parts) with iso-PrOH 130, ammonium lauryl sulfate (I) 2, water 36, and 1,2-epoxyhexadecane 18, stirred, heated to 70.degree. and combined with KOH 3.15 parts, and heated at 70.degree. for addnl. 3 h to give a **product**, 400 parts of a 0.5% aq. soln. of which at pH 6.0 with a 28% aq. soln. of I in 0.2, 0.4, 06, and 0.8 part showed Brookfield viscosity of 905, 4150, 6680, and 6900, resp.

IT **26249-20-7**, Butylene oxide
RL: USES (Uses)
(hydroxyalkylation with, of galactomannan)

IT **102962-18-5DP**, etherified to hydrophobic groups
RL: PREP (Preparation)
(**prepn.** of amphiphilic, for thickeners)

L18 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:410198 HCAPLUS
DOCUMENT NUMBER: 117:10198
TITLE: **Process** for **preparing** hydrophobically modified **guar** ethers
INVENTOR(S): Zody, George M.; Morgan, Michael E.
PATENT ASSIGNEE(S): Hi-Tek Polymers, Inc., USA
SOURCE: Can. Pat. Appl., 19 pp.
CODEN: CPXXEB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CA 2023324	AA	19920106	CA 1990-2023324	19900815

PRIORITY APPLN. INFO.: US 1990-547968 19900705

AB The title ethers useful as thickeners are **prepd.** by a 2-step derivatization **process** in which the 1st step is carried out with hydrophilic reagents (e.g. alkylene oxide) under alk. conditions, and, without isolation of the **products**, the 2nd step carried out with

hydrophobic reagents (e.g. oxirane compds.) dissolved in org. solvents and reacted with the **guar** still in particulate form. In this manner, NaOH-pre-activated **guar** splits were hydroxyalkylated with propylene oxide, and derivatized with 1,2-epoxyhexadecane in propylene oxide to give an amphiphilic ether which exhibited high viscosity in aq. solns. contg. a surfactant.

IT **75-56-9DP**, Propylene oxide, galactomannan mixed etherified with **9000-30-0DP**, **Guar** gum, etherified with alkylene oxides and epoxy compds. **26249-20-7DP**, Butylene oxide, galactomannan mixed etherified with
RL: PREP (Preparation)
(**prepn.** of amphiphilic, for thickeners)

L18 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1992:8169 HCAPLUS
DOCUMENT NUMBER: 116:8169
TITLE: **Process** for the **preparation** of hydroxyalkyl **ethers** of **polysaccharides**
INVENTOR(S): Srivastava, Harish Chandra; Phadnis, Shashikant Purushottam; Parikh, Bharat Siddharthbhai
PATENT ASSIGNEE(S): Ahmedabad Textile Industry's Research Assoc., India
SOURCE: Indian, 12 pp.
CODEN: INXXAP
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
IN 166309	A	19900407	IN 1987-BO207	19870702

PRIORITY APPLN. INFO.: IN 1987-BO207 19870702

AB The title **process**, without use of expensive org. solvents, comprises hydroxyalkylation of polysaccharides, e.g. starch and gums in aq. or aq.-org. mixed media at 40-60.degree., in the presence of alk. catalyst and a gelling suppressant, e.g. inorg. salts. Thus, adding starch 100 to a soln. of Na2SO4 45 in water 150, flushing with N, adding Ca(OH)2 5, and then ethylene oxide 8 parts, and heating to 45 .+-. 2.degree. for 3 h gave a starch ether with degree of substitution 0.28. The polysaccharide derivs. are useful as sizes and adhesives for textiles, fibers and paper.

IT **39465-11-7P**, Hydroxyethyl **guar** gum
RL: PREP (Preparation)
(**prepn.** of, gelling prevention in)

IT **75-21-8**, Ethylene oxide, uses
RL: USES (Uses)
(reagents, for hydroxyalkylation of polysaccharides)

Cellulose ethers - claims 50-51


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=> d que stat l22
L20         9016 SEA FILE=HCAPLUS ABB=ON  ?CELLULOS?(3A)?ETHER? AND (?PROCES?
                 OR ?TECHNIQ? OR ?PRODUC? OR ?PREP?)
L21           51 SEA FILE=HCAPLUS ABB=ON  L20 AND (?ELECTRODIAL? OR ?SEMIPERMEAB
                 ? OR ?SEMI?(W)?PERMEAB? OR ?BIPOLAR? OR BI(W)?POLAR?)
L22            7 SEA FILE=HCAPLUS ABB=ON  L21 AND (PH OR ?ELEC?(W)?CURRENT?)


=> d l22 ibib abs hitrn 1-7

L22  ANSWER 1 OF 7  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:        2003:43049  HCAPLUS
DOCUMENT NUMBER:         138:91690
TITLE:                   Recycling of salts in the manufacture of modified
                         polysaccharide ethers from sodium salt stock
INVENTOR(S):             Mallon, Charles B.; Vames, John S.; Sarlis, John I.;
                         See, Benito; Trampe, David M.; Datta, Rathin
PATENT ASSIGNEE(S):      USA
SOURCE:                  U.S. Pat. Appl. Publ., 11 pp.
                         CODEN: USXXCO
DOCUMENT TYPE:           Patent
LANGUAGE:                English
FAMILY ACC. NUM. COUNT:  1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ----------------  ----  --------      ---------------  --------
     US 2003013871      A1   20030116      US 2001-775760   20010202
PRIORITY APPLN. INFO.:                    US 2001-775760   20010202
AB   Salts formed during the manuf. of polysaccharide ethers, e.g., sodium
     nitrate or sodium acetate, are converted to their corresponding acids and
     bases by means of an elec. current, preferably in
     combination with a bipolar membrane and suitable cation and/or
     anion membranes.  The acids and bases recovered from the processes
     can be recycled, thereby avoiding the need to provide for disposal of the
     salts.  Thus, a stream contg. .apprx.8% Na acetate, 0.5% NaOH, 4% glycols,
     and 0.5% cellulosic material recovered from a synthesis of hydroxyethyl
     cellulose was processed in a TS-2 ED stack contg. 6 cell pairs
     made up of AM-1, CM-2 and CURIUM ion-exchange membranes.  The pH
     of the feed was raised to .apprx.11.5 by addn. of 40% NaOH whenever the
     pH dropped to .apprx.11.  As a result of this pH
     control, .apprx.91% of the acetate was transferred and cell resistance was
     kept under control.  Na acetate concn. in the conc. was .apprx.20%.  The
     product from the ED step was then processed through a
     column contg. Duolite C-467 to remove multivalent cations.  Ca and Mg
     cations were below 1 ppm in the resulting stream.  This product
     stream was then subjected to water splitting electrodialysis
     using a 2-compartment TS-2 stack equipped with BP1, CM-1, and CMX ion
     exchange membranes.  The stream processed with no difficulty and
     produced an acid/salt product contg. about 16% acetic
     acid and a sodium hydroxide product with a concn. of .apprx.10%.
     There was no evidence of irreversible membrane fouling and cell voltage
     remained low (.apprx.1.2 V/cell pair) throughout the run.

L22  ANSWER 2 OF 7  HCAPLUS  COPYRIGHT 2003 ACS
ACCESSION NUMBER:        2000:117084  HCAPLUS
DOCUMENT NUMBER:         132:153513
TITLE:                   Production of polysaccharide hydroxyalkyl
                         ethers
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INVENTOR(S): Mallon, Charles B.; Vames, John S.; Sarlis, John Ioannis; See, Benito; Trampe, David M.; Datta, Rathin
PATENT ASSIGNEE(S): Union Carbide Chemicals & Plastics Technology Corp., USA
SOURCE: PCT Int. Appl., 32 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000008059	A1	20000217	WO 1999-US17597	19990803
W: AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GE, HU, ID, IL, IS, JP, KR, KZ, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2339374	AA	20000217	CA 1999-2339374	19990803
AU 9954643	A1	20000228	AU 1999-54643	19990803
EP 1109834	A1	20010627	EP 1999-940869	19990803
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 9912637	A	20011009	BR 1999-12637	19990803

PRIORITY APPLN. INFO.: US 1998-95263P P 19980804
WO 1999-US17597 W 19990803

AB **Processes** for the **prodn**. of polysaccharide **ethers**, e.g. **cellulose** hydroxyethyl **ether**, are disclosed wherein salts formed after the swelling and neutralization of the **process**, e.g., sodium nitrate or sodium acetate, are converted to their corresponding acids and bases by means of an **elec. current**, preferably in combination with a **bipolar** membrane and suitable cation and/or anion membranes. The acids and bases recovered from the **processes** can be recycled, thereby avoiding the need to provide for disposal of the salts.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L22 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:191189 HCAPLUS
DOCUMENT NUMBER: 102:191189
TITLE: Oral device for osmotic delivery of drugs
INVENTOR(S): Edgren, David; Wong, Patrick S. L.; Theeuwes, Felix
PATENT ASSIGNEE(S): Alza Corp., USA
SOURCE: U.S., 9 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4503030	A	19850305	US 1983-501573	19830606
US 4587117	A	19860506	US 1985-693649	19850122

PRIORITY APPLN. INFO.: US 1983-501573 19830606

AB An oral osmotic delivery device for dispensing a drug to certain

pH regions of the gastrointestinal tract consists of a wall formed of a **semipermeable** **pH**-sensitive compn. that surrounds a compartment contg. a drug, with a passage through the wall connecting the exterior of the device with the compartment. The device delivers the drug at a controlled rate in the region of the gastrointestinal tract having a **pH** <3.5 (stomach), self-destructs, and releases the remainder of the drug in the region of the gastrointestinal tract having a **pH** >3.5 (small intestine) thereby providing total availability for drug absorption. The wall is formed of a **semipermeable** material, such as a **cellulose** ester or **ether**, blended with a **pH**-sensitive material, such as a cellulose carboxylic acid ester which keeps its integrity at **pH** 1.0-3.58 but loses it at **pH** >3.5, and optionally a flux enhancer, such as hydroxypropyl Me cellulose [9004-65-3]. Thus, a device for delivering hydralazine-HCl [304-20-1] was manufd. by **prepg**. cores (275 mg) contg. drug 18.2, mannitol 75.9, hydroxypropyl Me cellulose 2.9, and stearic acid 3% by wt. and then coating the core with a **pH** -sensitive material consisting of cellulose acetate [9004-35-7] and hydroxypropyl Me cellulose phthalate [9050-31-1] coated to a wall wt. .apprx.20 mg and air-dried at 50.degree. for 48 h, after which a 10 mill hole was laser-drilled through the wall.

L22 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1985:12091 HCAPLUS
DOCUMENT NUMBER: 102:12091
TITLE: Elimination of acid-base generation ('water-splitting') in **electrodialysis**
AUTHOR(S): Rubinstein, I.; Warshawsky, A.; Schechtman, L.; Kedem, O.
CORPORATE SOURCE: Weizmann Inst. Sci., Rehovot, Israel
SOURCE: Desalination (1984), 51(1), 55-60
CODEN: DSLNAH; ISSN: 0011-9164
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Membranes contg. a crown ether were **prepd**. The membranes become pos. charged by complexing alkali-metal ions. In these anion-exchange membranes, not contg. amino groups, **pH** changes caused by above-limiting currents were very small in contrast to the substantial acid-base generation by conventional A membranes. This is consistent with R. Simons's model (1979). It is suggested that both suppression of acidification and the dynamic nature of the pos. charges may help to avoid fouling.

L22 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1976:136377 HCAPLUS
DOCUMENT NUMBER: 84:136377
TITLE: **Preparation** and properties of polymer sorbents containing p-aminomethylphenylboric acid groups
AUTHOR(S): Kolodkina, I. I.; Val'kovskii, D. G.; Pichuzhkina, E. I.; Ivanova, E. A.; Rogozhin, S. V.; Yurkevich, A. M.
CORPORATE SOURCE: Vses. Nauchno-Issled. Vitam. Inst., Moscow, USSR
SOURCE: Vysokomolekulyarnye Soedineniya, Seriya A (1976), 18(1), 47-52
CODEN: VYSAAF; ISSN: 0507-5475
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The title sorbents were obtained by reaction of chloromethylated and aminated divinylbenzene-styrene copolymer (I) [9003-70-7] with [p-(bromomethyl)phenyl]boroxole (II) [51239-44-2] yielding polymer contg.

groups R1CH2N+R22CH2C6H4B-(OH)3 (R1 = polymer residue, R2 = Me or Et), or by analogous reactions of (diethylamino)ethyl **ethers** of Sephadexes and **cellulose** or polyethylenepolyamine with II. Sorption properties of the **products** derived from I, Sephadex A-25 (diethylamino)ethyl ether [57866-54-3], and Sephadex A-50 (diethylamino)ethyl ether [39455-31-7] with resp. to adenosine 5'-phosphomorpholide [7331-13-7] or adenosine phosphates indicated that the **bipolar** structure of the sorbents facilitated formation of complexes at a wide range of **pH**.

L22 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1966:37056 HCAPLUS
DOCUMENT NUMBER: 64:37056
ORIGINAL REFERENCE NO.: 64:6923d-h
TITLE: Interaction of synthetic high-molecular-weight materials with sulfate and organic salts of aluminum
AUTHOR(S): Kirakos'yants, M. Kh.; Strakhov, I. P.
SOURCE: Nauchn. Tr. Mosk. Tekhnol. Inst. Legkoi Prom. (1964), No. 30, 26-33
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The interaction of various synthetic polymeric materials, having different functional groups, with sulfate-type Al salts was investigated by the method of equil. dialysis (Chanutin, et al., CA 36, 45315). The polymers tested were: poly(vinyl alc.) (PVA), mol. wt. 60,000; poly(acrylic acid) (PAA), mol. wt. 80,000; copolymer of styrene and maleic anhydride (S-MA), mol. wt. not detd.; urea-HCHO resin (U-F), mol. wt. not detd.; and Na carboxymethyl cellulose (CMC), mol. wt. 243,000, degree of etherification 43. These polymers have functional groups similar to those in collagen, and can form coordination bonds with Al. In tanning, these polymers enhance fixation of Al complexes in hides. Aq. solns. (20 g./l.) of polymers were used. At first, an aq. soln. of Al2(SO4)3.18H2O (brought to **pH** 4.2) was used; various salts of org. acids were then added. In all these solns., Al concn. corresponded to 20 g./l. The amts. of org. salts were 1.0-1.5 g.-equiv. per 1.0 g.-atom Al. The **pH** changed (4.0-4.7). The salts were tartrate, citrate, oxalate, and lactate. Solns. of polymers and Al salts were placed in a dialyzer with a cellophane film as a **semipermeable** membrane. As Al complex diffused into the cell with polymer soln., the latter turned gradually into a gel. Strongly coordinated bonds were formed with functional groups of polymers. The remaining (unbound) Al attained equil. on both sides of the membrane. The amt. of bound Al was detd. from the initial and later concns. of Al salt. The amt. of bound Al was higher when org. salts were present than in the case of nonstabilized Al sulfate. The enhancement of Al binding followed the order: S-MA > PVA > U-F > PAA > CMC, and for salt-stabilized sulfates: PVA tartrate > citrate > lactate > oxalate; PAA tartrate > citrate > oxalate > lactate; U-F citrate > tartrate > lactate > oxalate; CMC citrate > tartrate > oxalate > lactate; and S-MA tartrate > citrate > lactate > oxalate. The polymeric gels formed apparently had a cross-linked structure; the retained Al could not be removed by water. In contrast, nonstabilized Al sulfate did not interact strongly with functional groups of polymers, since Al compds. were leached out with water.

L22 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1934:6210 HCAPLUS
DOCUMENT NUMBER: 28:6210
ORIGINAL REFERENCE NO.: 28:799d-f
TITLE: Method of **electrodialysis**. Serum **electrodialysis** with glycine membranes

AUTHOR(S): Ettisch, G.; de Loureiro, J. A.
SOURCE: Biochem. Z. (1933), 266, 422-35
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Membranes are **prepd**. from collodion contg. glycine, 1:20,000, which decreases the viscosity. Add 2 mg. powd. glycine to 50 cc. collodion, shake for a few min. and pour on a glass plate after standing about 1/2 hr. The glycine suspension should be preferably fresh. **Electrodialysis** proceeds very rapidly with these membranes because they are permeable to anions, and after 35 min. the **pH** reaches a definitive value. Because of the shortness of time during which the **pH** drops from 7.8 to 6.8, usually about 10 min., a large part of the globulin is pptd. quickly. If a dry glycine-collodion membrane is used at the anode the end **pH** value is not attained so rapidly. It does not affect the results **whether** a parchment or **cellulose** membrane is used at the cathode.

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=> d que stat l23
L20         9016 SEA FILE=HCAPLUS ABB=ON  ?CELLULOS?(3A)?ETHER? AND (?PROCES?
                 OR ?TECHNIQ? OR ?PRODUC? OR ?PREP?)
L21           51 SEA FILE=HCAPLUS ABB=ON  L20 AND (?ELECTRODIAL? OR ?SEMIPERMEAB
                 ? OR ?SEMI?(W)?PERMEAB? OR ?BIPOLAR? OR BI(W)?POLAR?)
L22            7 SEA FILE=HCAPLUS ABB=ON  L21 AND (PH OR ?ELEC?(W)?CURRENT?)
L23            2 SEA L22

=> d ibib abs l23 1-2

L23  ANSWER 1 OF 2  WPIDS (C) 2003 THOMSON DERWENT
ACCESSION NUMBER:      2001-112499 [12]   WPIDS
CROSS REFERENCE:       2001-091751 [10]
DOC. NO. CPI:          C2001-033517
TITLE:                 Method for controlling the flux of penetrants across an
                       adaptable semi-permeable barrier is
                       useful for administering an agent to a mammalian body or
                       a plant and for generating an immune response by
                       vaccinating the mammal.
DERWENT CLASS:         A18 A28 A96 B05 B07 D16 D22
INVENTOR(S):           CEVC, G; RICHARDSEN, H; WEILAND-WAIBEL, A;
                       WEILAND-WEIBEL, A
PATENT ASSIGNEE(S):    (IDEA-N) IDEA AG
COUNTRY COUNT:         95
PATENT INFORMATION:

     PATENT NO   KIND DATE     WEEK      LA   PG
     ---------------------------------------
     WO 2001001963 A1 20010111 (200112)* EN  110
        RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ
            NL OA PT SD SE SL SZ TZ UG ZW
         W: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM
            DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC
            LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
            SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
     AU 2000061557 A  20010122 (200125)
     BR 2000012178 A  20020312 (200226)
     EP 1189598    A1 20020327 (200229)  EN
         R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT
            RO SE SI
     CZ 2002000038 A3 20020515 (200241)
     CN 1359288    A  20020717 (200268)
     HU 2002001454 A2 20021228 (200308)
     JP 2003503442 W  20030128 (200309)      109

APPLICATION DETAILS:

     PATENT NO   KIND                    APPLICATION      DATE
     ---------------------------------------------------------
     WO 2001001963 A1                    WO 2000-EP6367   20000705
     AU 2000061557 A                     AU 2000-61557    20000705
     BR 2000012178 A                     BR 2000-12178    20000705
                                         WO 2000-EP6367   20000705
     EP 1189598    A1                    EP 2000-947939   20000705
                                         WO 2000-EP6367   20000705
     CZ 2002000038 A3                    WO 2000-EP6367   20000705
                                         CZ 2002-38       20000705
     CN 1359288    A                     CN 2000-809916   20000705
     HU 2002001454 A2                    WO 2000-EP6367   20000705
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JP 2003503442 W	HU 2002-1454	20000705
	WO 2000-EP6367	20000705
	JP 2001-507458	20000705

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 2000061557	A	Based on	WO 200101963
BR 2000012178	A	Based on	WO 200101963
EP 1189598	A1	Based on	WO 200101963
CZ 2002000038	A3	Based on	WO 200101963
HU 2002001454	A2	Based on	WO 200101963
JP 2003503442	W	Based on	WO 200101963

PRIORITY APPLN. INFO: WO 1999-EP4659 19990705
AN 2001-112499 [12] WPIDS
CR 2001-091751 [10]
AB WO 200101963 A UPAB: 20030206
NOVELTY - A method for controlling the flux of penetrants across an adaptable **semi-permeable** porous barrier is new.

DETAILED DESCRIPTION - A method for controlling the flux of penetrants across an adaptable **semi-permeable** membrane comprises suspending the penetrants in a polar liquid in the form of fluid droplets surrounds by a membrane-like coating comprising at least two kinds of amphiphilic substances with a tendency to aggregate, selecting a dose of the penetrants to control the flux of the penetrants across the barrier and applying the selected dose of the formulation onto the area of the barrier. The amphiphilic substances differ by a factor of at least 10 in solubility in the polar liquid and the homo-aggregates of the more soluble substance and hetero-aggregates have a preferred average diameter smaller than the diameter of the homo-aggregates of the less soluble substance. The more soluble substance tends to solubilize the droplet and comprises up to 99% of the solubilizing concentration or saturating concentration in the unstabilized droplet. The presence of the more soluble substance lowers the average elastic energy of the coating by at least 5 times preferably more than 10 times the average elastic energy of red blood cells or of phospholipid bilayers with fluid aliphatic chains. The penetrants are able to transport agents through the pores of the barrier or enable agent permeation through the pores after the penetrants have entered the pores.

INDEPENDENT CLAIMS are included for:
(i) a kit containing the formulation;
(ii) a patch containing the formulation; and
(iii) a method of administering an agent to a mammalian body or plant comprising the novel method.

USE - The method is useful for administering an agent to a mammalian body or a plant, for generating an immune response by vaccinating the mammal and for treating inflammatory disease, dermatosis, kidney or liver failure, adrenal insufficiency, aspiration syndrome, Behcet syndrome, bites and stings, blood disorders (cold-hemagglutinin disease), hemolytic anaemia, hypereosinophilic, hypoplastic anaemia, macroglobulinaemia and thrombocytopenic purpura), bone disorders, cerebral oedema, Cogan's syndrome, congenital adrenal hyperplasia, connective tissue disorders (lichen, lupus erythematosus, polymyalgia rheumatica, polymyositis and dermatomyositis), epilepsy, eye disorders (cataracts), Graves' ophthalmopathy, hemangioma, herpes infections, neuropathies, retinal vasculitis, scleritis, gastro-intestinal disorders (inflammatory bowel disease, nausea and oesophageal damage), hypercalcaemia, infections, Kawasaki disease, myasthenia gravis, pain syndromes, polyneuropathies,

pancreatitis, respiratory disorders (asthma), rheumatoid disease, osteoarthritis, rhinitis, sarcoidosis, skin diseases, alopecia, eczema, erythema multiforme, lichen, pemphigus and pemphigoid, psoriasis, pyoderma gangrenosum, urticaria and thyroid and vascular disorders.

ADVANTAGE - Increasing the applied dose above a threshold level affects both the drug/penetrant distribution and also determines the rate of penetrant transport across the barrier.

Dwg.0/14

L23 ANSWER 2 OF 2 WPIDS (C) 2003 THOMSON DERWENT

ACCESSION NUMBER: 2000-205675 [18] WPIDS
DOC. NO. CPI: C2000-063455
TITLE: **Production** of polysaccharide ether, for industrial and personal care applications, includes subjecting salts to **electric current**.
DERWENT CLASS: A11
INVENTOR(S): DATTA, R; MALLON, C B; SARLIS, J I; SEE, B; TRAMPE, D M; VAMES, J S
PATENT ASSIGNEE(S): (UNIC) UNION CARBIDE CHEM & PLASTICS TECHNOLOGY
COUNTRY COUNT: 75
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000008059	A1	20000217	(200018)*	EN	32
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ UG ZW					
W: AL AU BA BB BG BR CA CN CU CZ EE GE HU ID IL IS JP KR KZ LC LK LR LT LV MG MK MN MX NO NZ PL RO RU SG SI SK SL TR TT UA US UZ VN YU ZA					
AU 9954643	A	20000228	(200030)		
EP 1109834	A1	20010627	(200137)	EN	
R: AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
BR 9912637	A	20011009	(200168)		
CN 1322215	A	20011114	(200217)		
MX 2001001247	A1	20010501	(200227)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000008059	A1	WO 1999-US17597	19990803
AU 9954643	A	AU 1999-54643	19990803
EP 1109834	A1	EP 1999-940869	19990803
		WO 1999-US17597	19990803
BR 9912637	A	BR 1999-12637	19990803
		WO 1999-US17597	19990803
CN 1322215	A	CN 1999-811749	19990803
MX 2001001247	A1	MX 2001-1247	20010201

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9954643	A	Based on	WO 200008059
EP 1109834	A1	Based on	WO 200008059
BR 9912637	A	Based on	WO 200008059

PRIORITY APPLN. INFO: US 1998-95263P 19980804

AN 2000-205675 [18] WPIDS
AB WO 200008059 A UPAB: 20000412
NOVELTY - Polysaccharide ether, is **produced** by subjecting the salts to an **electric current** effective to promote the conversion of the salts to their respective acids and bases.

DETAILED DESCRIPTION - **Production** of polysaccharide ether comprises:

(i) treating a polysaccharide with a basic compound to promote swelling of the polysaccharide,

(ii) reacting the polysaccharide with at least one derivatizing agent in a liquid medium to promote reaction between the polysaccharide and the derivatizing agent and form a reaction **product** comprising a polysaccharide ether and the basic compound,

(iii) treating at least a portion of the reaction **product** with an acidic compound, to provide a neutralizing liquid comprising a salt of the acidic compound and the basic compound, and

(iv) separating the polysaccharide ether from at least one of the reaction **product** of the neutralized liquid.

The improvement comprises subjecting the neutralized liquid to an **electric current** and suitable means to promote the conversion of the salt to the acidic compound and the basic compound.

USE - For the **production** of polysaccharide **ethers**, especially hydroxyethyl **cellulose**, for use in industrial application, e.g., viscosity adjuster, suspension aids and oil field drilling, and personal care application, e.g., ointments, skin creams, lotions and soaps.

ADVANTAGE - The acids and bases recovered from the **processes** can be recycled, thus avoiding the need to provide for disposal of the salts. The degree of fouling of the membrane can be reduced and the ionic mobility of the salt through the membrane can be enhanced by conducting the **electrodialysis** at an alkaline **pH**.
Dwg.0/1